Information Bulletin

Wording in Final Safety Analysis Report Leads to Positive Unreviewed Safety Question

June 8, 2007 **2007-RL-HNF-0024** **Tracking No: 559**

Summary: When developing safety analysis documents management must ensure that verbiage used in safety documentation eliminates the chance for misunderstanding and/or misinterpretation. When using quantitative terms it is important to clearly state whether the information is an expectation, an example, or an assumption of the analysis.

Discussion of Activities: On February 2, 2007 the K Basin Closure project Plant Review Committee declared a positive Unreviewed Safety Question (USQ) for exceeding 40 hours of total Hose in Hose (HIH) slurry transfer time. The Department Of Energy's HIH Safety Evaluation Report (SER) and the K Basin Final Safety Analysis Report (FSAR) assumed transfer time of approximately 40 hours, via parenthetical reference. Slurry transfer was performed for over 40 hours; therefore, this was considered a potential decrease in the margin of safety. The discovery of the parenthetical reference to 40 hours of sludge transfer operations in the FSAR was conservatively categorized as an occurrence because it may have implied an underlying assumption that the analysis had not been met since actual sludge transfer operations had been performed in excess of that period.

Analysis: The assumed 40 hour time limit for pumping slurry during HIH transfer time is not a Technical Safety Requirement (TSR). The K Basins FSAR states that consideration was given to the need for additional safety significant safety controls or TSR controls, but it was determined that the risk associated with a design basis fire was acceptable based on the relatively short amount of time that slurry would actually be pumped from 105-KE Basin to the 105-KW Basin (approximately 40 hours). DOE's HIH SER included the assumed 40-hour transfer time in two places: (1) for accepting the residual risk of an external fire and (2) for determining there would be no benefit to increase any of the existing safety controls which were relied upon to mitigate the spray release accident.

Reference of the transfer duration in the FSAR statement was to provide justification for DOE's acceptance of residual risk and was not originally intended to be a restriction.

Recommended Actions: None

Cost Savings/Avoidance: Not determined

Work Function: Authorization Basis

Hazards: Other

ISM Core Functions: Define Work

Keywords: K Basins, Hose in Hose, Safety Analysis Report, Safety Evaluation Report

Originator: Fluor Hanford, Inc., Submitted by Jennifer Bilskis K Basins Closure Project

Contact: PHMC Lessons Learned; *(509) 372-2166; e-mail: PHMC_Lessons_Learned@rl.gov*

References: Occurrence Report EM-RL--PHMC-SNF-2007-0003, Positive USQ - Total Slurry Transfer Time Assumption